

WHAT IS CLAIMED IS:

1. A data communication apparatus for data communication via cables, the apparatus comprising:

a drop detecting circuit for detecting a drop in a power supply voltage supplied to
5 the data communication apparatus; and

a stop signal outputting circuit for outputting a communication stop signal via the cable, in response to a drop detection signal output from the drop detecting circuit.

2. The data communication apparatus of claim 1, wherein when the drop detecting
10 circuit detects a drop in the power supply voltage, a communication circuit embedded in the data communication apparatus for data communication stops the function of the communication circuit in response to the drop detection signal output from the voltage-drop detecting circuit.

15 3. The data communication apparatus of claim 1, including a common-mode-potential setting circuit for setting a common-mode potential of a differential signal at the cables,

wherein the stop signal outputting circuit decreases the common-mode potential set by the common-mode-potential setting circuit to a ground potential, thereby outputting a
20 communication stop signal.

4. The data communication apparatus of claim 1, wherein the drop detecting circuit includes:

a voltage converting circuit having an outputting voltage which varies depending
25 on a drop in the power supply voltage; and

a comparator for comparing a voltage variation signal output from the voltage converting circuit with a predetermined constant voltage value.

5 5. The data communication apparatus of claim 4, wherein the voltage converting circuit includes:

a load circuit having a load resistance which varies depending on variation in the power supply voltage; and

at least one resistance connected to the load circuit in series.

10 6. The data communication apparatus of claim 4, wherein the comparator includes:

a differential amplifier for receiving the voltage variation signal output from the voltage converting circuit and a predetermined constant voltage value signal; and

an inverter for receiving an output from the differential amplifier and inverting the output, and

15 the inverter includes:

a p-type transistor for receiving the output from the differential amplifier; and

a resistance connected to the p-type transistor in series and having a high resistance value.

20 7. A data communication method for data communication via cables, the method comprising the steps of:

detecting a drop in a power supply voltage applied, thereby detecting a stop of the application of the power supply voltage; and

25 decreasing a potential at the cables when detecting the stop of the application of the power supply voltage, thereby outputting a communication stop signal.